

LISTING OF CLAIMS

Claim 1 (previously presented): An optical system which guides a displaying luminous flux from a display device to an eye of an observer, comprising:

a first optical element and a second optical element in order from the side of an exit pupil of the optical system to the side of the display device,

wherein a combined optical power provided by an emergent surface of the second optical element and an incident surface of the first optical element is a negative optical power, and the optical system forms an intermediate image with the displaying luminous flux in the first optical element; and

wherein the first optical element includes at least a first surface which has a reflecting action and a second surface which reflects the displaying luminous flux reflected by the first surface back toward the first surface such that a central principal ray of the displaying luminous flux incident again on the first surface is reflected and travels toward a substantially opposite side to a reflecting side in the previous reflection with respect to a normal to the first surface at a hit point of the central principal ray.

Claim 2 (previously presented): The optical system according to claim 1, wherein the display device is a reflective display device,

and the optical system further comprises a third optical element between the reflective display device and the second optical element.

Claim 3 (original): The optical system according to claim 1, wherein the optical system forms a pupil image in an optical path of the displaying luminous flux in the first optical element.

Claim 4 (original): The optical system according to claim 1, wherein the optical system forms a pupil image in an optical path of the displaying luminous flux in the second optical element.

Claim 5 (original): The optical system according to claim 1, wherein at least one of the first and second optical elements includes a reflective surface decentered with respect to an optical path of the displaying luminous flux.

Claim 6 (canceled).

Claim 7 (previously presented): The optical system according to claim 1, wherein the first optical element reflects the displaying luminous flux a plurality of times by a reflective surface which is decentered with respect to an optical path of the displaying luminous flux,

and the optical system includes a case where an inner product which is formed between outer products each formed by a vector indicating incident light and a vector indicating reflected light in the respective reflections at the reflective surface is negative.

Claim 8 (original): An image display apparatus comprising:
a display device which forms an original image; and
the optical system according to claim 1.

Claim 9 (previously presented): An optical system which guides a displaying luminous flux from a display device to an eye of an observer, comprising:

a first optical element and a second optical element in order from the side of an exit pupil of the optical system to the side of the display device,

wherein a combined optical power provided by an emergent surface of the second optical element and an incident surface of the first optical element is a negative optical power, and the optical system forms an intermediate image with the displaying luminous flux in the first optical element;

wherein the first optical element reflects the displaying luminous flux a plurality of times by a reflective surface which is decentered with respect to an optical path of the displaying luminous flux; and

wherein the optical system includes a case where an inner product which is formed between outer products each formed by a vector indicating incident light and a vector indicating reflected light in the respective reflections at the reflective surface is negative.

Claim 10 (previously presented): The optical system according to claim 9, wherein the display device is a reflective display device,

and the optical system further comprises a third optical element between the reflective display device and the second optical element.

Claim 11 (previously presented): The optical system according to claim 9, wherein the optical system forms a pupil image in an optical path of the displaying luminous flux in the first optical element.

Claim 12 (previously presented): The optical system according to claim 9, wherein the optical system forms a pupil image in an optical path of the displaying luminous flux in the second optical element.

Claim 13 (previously presented): The optical system according to claim 9, wherein at least one of the first and second optical elements includes a reflective surface decentered with respect to an optical path of the displaying luminous flux.

Claim 14 (previously presented): An image display apparatus comprising:

a display device which forms an original image; and
the optical system according to claim 9.